IN THE CLAIMS

Listing of Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Claim 1. (Withdrawn) A method for an early diagnosis of cancer in a subject comprising the steps of:

i) providing a fecal sample from said subject;

ii) treating said sample to obtain a feces-derived microorganism sample;

iii) identifying in the microorganism sample one or more types of microorganisms contained therein; and

(iv) determining for each of said microorganisms its relative fraction from the total count of microorganisms in said sample, the relative fractions being indicative of the presence or absence of cancer in said subject.

Claim 2. (Withdrawn) The method of claim 1, wherein said subject is a human subject.

Claim 3. (Withdrawn) The method of claim 1, wherein said microorganisms are isolated by colonies formation on selective culture mediums.

Claim 4. (Withdrawn) The method of claim 1, wherein said relative fraction of each of said microorganisms is determined by calculating the percentage of said microorganism from the total, count of microorganisms in the same or corresponding sample.

Claim 5. (Withdrawn) The method of claim 1, wherein said microorganism are bacteria.

Claim 6. (Withdrawn) The method of claim 5, wherein said bacteria are Gram-negative anaerobic bacteria.

Claim 7. (Withdrawn) The method of claim 6, wherein said Gram-negative anaerobic bacteria is of a genus selected from the group consisting of Escherichia, Salmonella, Shigella,

Klebsiella, Yersinisa, Enterobacter, Hemophilus, Gandneralla and Pasteurella.

Claim 8. (Withdrawn) The method of claim 7, wherein said bacteria is *E. coli*.

Claim 9. (Withdrawn) The method of claim 8, wherein *E. coli* coliform is isolated from said, fecal sample by culturing the feces derived sample of bacteria on a culture medium selective for *E. coli*.

Claim 10. (Withdrawn) The method of claim 9, wherein the culture medium is selected from the group consisting of McConkey agar and m-Endo agar.

Claim 11. (Withdrawn) The method of claim 5, wherein said. bacteria are Gram-positive bacteria.

Claim 12. (Withdrawn) The method of claim 11, wherein said Gram-positive bacteria is of a genus selected from the group consisting of Staphylococcus, Enterococcus, Streptococcus, and Lactococcus.

Claim 13. (Withdrawn) The method of claim 12, wherein, said bacteria is *Streptococcus bovis*, *Enterococcus sp* or both.

Claim 14. (Withdrawn) The method of claim 13, wherein Enterococci coliform is isolated from said fecal sample by culturing the feces-derived sample of bacteria on a culture medium selective for Enterococcus.

Claim 15. (Withdrawn) The method of claim 14, wherein said culture medium is selected from the group consisting of Slanetz-Bartley agar and Bile-esculined-azide agar.

Claims 16 - 35 (Cancelled)

Claim 36. (Withdrawn) A method for an early diagnosis of cancer comprising the steps of:

i) providing a fecal sample from said subject;

ii) treating said sample to obtain a feces-derived microorganism sample;

iii) identifying in the microorganism sample at least one type of microorganism capable of expressing in a healthy subject L-asparaginase II (L-PAR II); and

iv) determining level of expression of L-PAR II or level of activity of L-PAR II, said level is indicative of the presence or absence of cancer cells in said subject.

Claim 37. (Withdrawn) The method of claim 36, wherein said fecal sample is a human fecal sample.

Claim 38. (Withdrawn) The method of claim 36, wherein said treatment includes removal of undesired contamination from said fecal sample to obtain an uncontaminated feces-derived bacteria sample.

Claim 39. (Withdrawn) The method of claim 36, wherein said microorganisms are isolated from the feces-derived bacteria sample by colonies formation on selective culture plates.

Claim 40. (Withdrawn) The method of claim 36, wherein said microorganisms capable of expressing L-PAR II is *E. coli*.

Claim 41. (Withdrawn) The method of claim 36, wherein low levels of expression of L-PAR II or of activity of L-PAR II, indicate the presence of cancer cells in said subject.

Claim 42. (Currently Amended) A method for diagnosis of cancer in a subject comprising the steps of:

(i) providing at least a first and second fecal sample from said subject;

(ii) treating said fecal samples to obtain feces-derived bacteria samples therefrom;

(iii) identifying in the feces-derived bacteria samples one or more types of bacteria;

(iv) determining for each of said one or more types of bacteria its relative fraction from a total count of bacteria in one of the feces-derived bacteria samples ~~or in a~~

~~second bacteria sample obtained from the other fecal samples~~;

(v) isolating one or more types of bacteria from one or both of the feces-derived bacteria samples;

(vi) preparing a diagnostic sample containing bacteria of the one or more types isolated in step v), the fraction of each of the one or more types of bacteria in said diagnostic sample corresponding to the relative fraction thereof in the fecal samples, as determined in step (iv);

(vii) interacting said diagnostic sample with cancer cells for a time period sufficient to detect lysis of said cancer cells by said diagnostic sample, thereby determining for said fecal sample a tumor cell necrosis index (TCNI); and

(viii) diagnosing said subject as having or not having cancer in accordance with the TCNI value determined in step (vii).

Claim 43. (Currently Amended) A method for diagnosis of cancer in a subject comprising the steps of:

(i) providing at least a first and second fecal sample from said subject;

(ii) treating said fecal samples to obtain feces-derived bacteria samples;

(iii) identifying in the feces-derived bacteria samples more than one type of bacteria;

(iv) determining for each of said more than one type of bacteria its relative fraction, from a total count of bacteria in one of the feces-derived bacteria samples ~~in a corresponding different bacteria sample obtained from the additional fecal sample~~;

(v) isolating one or more types of bacteria from said one of the feces-derived bacteria samples;

(vi) preparing a diagnostic sample containing the bacteria isolated in step v), the fraction of each of the more than one type of bacteria in said diagnostic sample corresponding to the relative fraction thereof as determined in step (iv);

(vii) interacting said diagnostic sample with cancer cells for a time period sufficient to detect lysis of said cancer cells by said diagnostic sample, thereby determining for said fecal sample a tumor cell necrosis index (TCN1); and

(viii) diagnosing said subject as having or not having cancer in accordance with the TCNI value determined in step (vii).

Claim 44. (Previously Presented) The method of Claim 42, wherein said bacteria are feces-derived bacteria.

Claim. 45. (Previously Presented) The method of Claim 44, wherein said feces-derived bacteria are selected from the group consisting of *E. coli, Streptococus Bois,* and *Enterococcus sp* or a mixture thereof.

Claim 46. (Previously Presented) The method of Claim 42, wherein said fecal sample is a human fecal sample.

Claim 47. (Previously Presented) The method of Claim 46, wherein said treatment includes removal of contamination from said fecal sample to obtain an uncontaminated feces-derived bacteria sample.

Claim 48. (Previously Presented) The method of Claim 42, wherein said bacteria are isolated by colonies formed on selective culture mediums.

Claim 49. (Currently Amended) The method of Claim 42, wherein said relative fraction of each of said bacteria types of step (iv) is determined by calculating the percentage of each said bacteria type from the total count of bacteria in the same bacteria sample.

Claim 50. (Previously Presented) The method of Claim 42, wherein said bacteria are Gram-negative anaerobic bacteria.

Claim 51. (Previously Presented) The method of Claim 50, wherein said Gram-negative anaerobic bacteria is of a genus selected from the group consisting *of Escherichia, Salmonella, Shigella, Klebsiella, Yersinia, Enterobacter, Hemophilus, Gardnerella* and *Pasteurella.*

Claim 52. (Previously Presented) The method of Claim 51, wherein said bacteria is *E. coli.*

Claim 53. (Currently Amended) The method of Claim 52, wherein said *E. coli* is isolated from

said the feces-derived bacteria ~~fecal sample~~ by culturing the feces-derived sample of bacteria on a culture medium selective for *E. coli.*

Claim 54. (Previously Presented.) The method of Claim 53, wherein the culture medium is selected from the group consisting of MacConkey agar and m-Endo agar.

Claim 55. (Previously Presented) The method of Claim 49, wherein said bacteria are Gram-positive bacteria.

Claim 56. (Currently Amended) The method of Claim 55, wherein said Gram-positive bacteria is of a genus selected from the group consisting of Staphylococcus, Enterococcus, Streptococcus, and Lactococcus[~~;~~] .

Claim 57. (Currently Amended) The method of ~~Claim.~~ Claim 56, wherein said bacteria ~~bacterial~~ is *Streptococcus bovis*, ~~and/or~~ *Enterococcus* sp. or both.

Claim 58. (Currently Amended) The method of Claim 57, wherein Enterococci coliform is isolated from said ~~fecal~~ feces-derived bacteria sample by culturing the feces-derived sample of bacteria on a culture medium selective for Enterococcus.

Claim 59. (Previously Presented) The method of Claim 58, wherein said culture medium is selected from the group consisting of Slanetz-Bartley agar and Bile-esculine-azid-agar.

Claim 60. (Cancelled) The method of Claim 42, wherein said cancer cells are a culture of (MCF7) cancer cells (accession No. ATCC HTB-22).

Claim 62. (Previously Presented) The method of Claim 42, wherein said diagnostic sample is interacted with the cancer cells for a time period sufficient to determine the extent of interaction between the bacteria and the cancer cells.

Claim 63. (Previously Presented) The method of Claim 62, wherein at the end of the time period, the number of interacted and/or non-interacted cancer cells present at the end of said

time period is determined.